

**IN THE CLAIMS**

Please substitute claims 1-17 with the following:

1-3. (Cancelled).

4. (Previously Presented) A battery pack including at least a battery cell and a protection circuit for shutting off overcurrent discharge to a load, said protection circuit comprising:

an integrated circuit including a overvoltage detection unit;

a discharging shut-off switch controlled by the integrated circuit and connected in series with the load;

a diode wired in parallel to said discharging shut-off switch; and

a shut-off holding means-unit connected between a-the battery cell positive terminal and an external minus- negative terminal of the protection circuit, said shut-off holding means comprising (a) a resistor block of resistance larger than 1 k $\Omega$  and smaller than 200 k $\Omega$ ; and (b) a detector in parallel with the resistor block for detecting voltage between an external plus terminal and the external minus terminal, wherein the load is connected to the external plus terminal and the external minus terminal;

wherein,

the overvoltage detection unit detects an abnormal discharge of the battery caused by shorting or connecting a low resistance between the external plus terminal and the external minus terminal,

the discharge shut-off switch opens in response to a abnormal discharge, of the battery pack is shut off, and

~~such the shut-off holding unit maintains the discharge shut-off in the open position~~  
~~is maintained by the shut-off holding means~~[[;]], and

~~the said discharge shut-off switch is released~~~~closes~~ to recover discharge upon ~~detecting~~  
~~detection~~ by the ~~detector~~ shut-off holding unit ~~the application~~ of a predetermined voltage  
between the external plus terminal and the external minus terminal of the battery pack.

5. (Previously Presented) The battery pack as cited in claim 4, wherein said detector is one of a charger detector, a voltage detector, a voltage change detector, an A.C. resistance detector, and a voltage dropper.

6. (Previously Presented) The battery pack as cited in claim 4, wherein said detector is connected to one of a differentiation circuit, and an one-shot circuit.

7. (Currently Amended) The battery pack as cited in claim 4, wherein said ~~discharge shut-off by the shut-off holding means is made by a discharging control~~ shut-off switch is connected between the battery cell negative terminal and the external minus terminal.

8. (Currently Amended) The battery pack as cited in claim 4, wherein said ~~discharge shut-off by the shut-off holding means is made by a discharging control switch~~ is connected between the battery cell positive terminal and the external plus terminal.

9. (Withdrawn) The battery pack as cited in claim 7 or 8, wherein said discharging control switch is one of a mechanical switch, a transistor, and a field effect transistor.

10. (Withdrawn) The battery pack as cited in claim 1, wherein one of a capacitor, and a voltage smoother is connected between the external plus terminal and the external minus terminal.

11. (Withdrawn) The battery pack as cited in claim 1, wherein one of a capacitor, and a voltage smother is connected between the external plus terminal and the external minus terminal, and

in case of a circuit configuration where the discharging control switch is connected to the battery minus terminal, a resistor is connected between the external minus terminal and the voltage supply terminal for returning overcurrent shut-off or the overcurrent voltage detection terminal of the control IC in the protection circuit, or alternatively in the circuit configuration in which the discharging control switch is connected to the battery plus terminal, a resistor is connected between the external plus terminal and the voltage supply terminal for returning overcurrent shut-off or the overcurrent voltage detection terminal of the control IC in the protection circuit.

12. (Withdrawn) The battery pack as cited in claim 1, wherein a p-channel field effect transistor, a resistor and a capacitor are provided as the releasing means for releasing overcurrent discharge shut-off;

the drain terminal of the p-channel field effect transistor and the switch control terminal of the discharging control switch are connected;

the source terminal of the p-channel field effect transistor and the external plus terminal are connected;

a resistor is connected in parallel between the source and gate terminals of the p-channel field effect transistor; and

a capacitor is connected between the gate terminal of the p-channel field effect transistor and the external minus terminal.

13. (Withdrawn) The battery pack as cited in claim 1, wherein

a PNP junction transistor, a resistor and a capacitor are provided as the releasing means for releasing overcurrent discharge shut-off;

the collector terminal of the transistor and the switch control terminal of the discharging control switch are connected;

the emitter terminal of the transistor and the external plus terminal are connected; and

a resistor having a resistance value of  $0\ \Omega$  or larger and a capacitor are connected in series between the base terminal of the transistor and the external minus terminal.

14. (Withdrawn) The battery pack as cited in claim 1, wherein

an n-channel field effect transistor, a resistor and a capacitor are provided as the releasing means for releasing overcurrent discharge shut-off;

the drain terminal of the n-channel field effect transistor and the switch control terminal of the discharging control switch are connected;

the source terminal of the n-channel field effect transistor and the external minus terminal are connected;

a resistor is connected in parallel between the source and base terminals of the n-channel field effect transistor; and

a capacitor is connected between the gate terminal of the n-channel field effect transistor and the external plus terminal.

15. (Withdrawn) The battery pack as cited in claim 1, wherein

an NPN junction transistor, a resistor and a capacitor are provided as the releasing means for releasing overcurrent discharge shut-off;

the collector terminal of the transistor and the switch control terminal of the discharging control switch are connected;

the emitter of the transistor and the external minus terminal are connected; and  
a block of a series connection of a resistor having a resistance value of  $0\ \Omega$  or larger and  
a capacitor are connected between the base terminal of the transistor and the external plus  
terminal.

16. (Withdrawn) The battery pack as cited in claim 1, wherein  
an inductor, a first capacitor, a second capacitor, and a diode are provided as the releasing  
means for releasing overcurrent discharge shut-off;

the inductor and the first capacitor are connected in series;

the other end of the inductor is connected to the external plus terminal;

the other end of the first capacitor is connected to the external minus terminal;

the second capacitor is connected to the junction of the inductor and the first capacitor;

the other end of the second capacitor and the anode of the diode are connected in series;

and

the cathode of the diode is connected to the switch control terminal of the discharging  
control switch.

17. (Withdrawn) The battery pack as cited in claim 1, wherein  
an inductor, a first capacitor, a second capacitor, and a diode are provided as the releasing  
means for releasing overcurrent discharge shut-off;

the inductor and the first capacitor are connected in series;

the other end of the first capacitor is connected to the external plus terminal;

the other end of the inductor is connected to the external minus terminal;

the second capacitor is connected to the junction of the inductor and the first capacitor;

the other end of the second capacitor and the cathode of the diode are connected in series;  
and  
the anode of the diode is connected to the switch control terminal of the discharging  
control switch.